

Abstract: A single-usage network tap monitors network information flow over a particular connection. Instead of requiring a tap for each analytical device, by incorporating elements that regenerate, spread, and coordinate the timing of the signal, multiple, simultaneous, and parallel analytical devices can monitor a particular network connection through one tap. It incorporates four amplifiers preferably manufactured on the same IC die with high-impedance input terminals connected directly to the two conductors of a gigabit Ethernet local area network digital transmission line so as not to load or otherwise upset its impedance or other parameters. The output terminals of the operational amplifiers are connected to and match the input impedance of the digital transmission protocol Gigabit analyzer. The gain of the operational amplifiers is arranged so as to replicate at the input of the analyzer the signals appearing on the Gigabit local area network transmission line with uninterruptible power supply.